

34. (New) The heat exchanger system of claim 15, wherein said first appendage does not substantially abut any part of said second appendage.

35. (New) The heat exchanger system of claim 16, wherein said first appendage is continuously curved from said end to a free end of said first appendage.

### **REMARKS**

#### **A. 35 U.S.C. § 112, Second Paragraph**

In the Office Action of December 17, 2002, claims 15-18 and 22-28 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite in meaning. In particular, claim 15 was objected to because the phrases “a condenser” and “side tube disposed adjacently to said condenser.” Claim 15 has been amended so that the phrase “side tube disposed adjacently to said condenser” has been deleted. Since the claim is definite in meaning, the rejection has been overcome and should be withdrawn.

Claim 22 was rejected for using “automotive” instead of “automobile.” Claim 22 has been amended to replace “automotive” with “automobile” as suggested by the Examiner. Accordingly, the rejection has been overcome and should be withdrawn. Since the amendment is being made to correct an obvious error in diction/spelling, the amendment is not being presented for reasons of patentability as defined in Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 234 F.3d 558, 56 USPQ2d

1865 (Fed. Cir. 2000).

Claim 23 was rejected because the meaning of residential condenser was unclear. Claim 23 has been amended to clarify that the condenser is installed in an air conditioning unit positioned within a residence. Since the claim is clear in meaning, the rejection has been overcome and should be withdrawn.

Claim 24 was rejected because the recitation of the condenser being used with an oil cooler was a contradiction. Claim 24 has been amended to clarify that the condenser is part of a cooling system of an automobile. Since the claim is clear in meaning, the rejection has been overcome and should be withdrawn.

**B. 35 U.S.C. § 102**

Claims 1-4, 8-11, 15-18 and 22-28 were rejected under 35 U.S.C. § 102(b) as being anticipated by Yoshii et al. Claims 1 and 15 have been amended to clarify that the “second appendage is not attached to said first appendage.” As shown in FIG. 1, there are two appendages wherein each appendage include items 4a, 10, 4e and 4f. Connecting portions 4a of each appendage are attached to each other (Col. 3, ll. 9-11). Accordingly, claims 1 and 15 are not anticipated by one another and so the rejection should be withdrawn.

Besides not being anticipated by Yoshii et al., claims 1 and 15 are not rendered obvious by Yoshii et al. because there is no suggestion or motivation to disconnect the

connecting portions 4a from one another.

Please note that claims 16-28 have been amended to correct an obvious inadvertent error in the preamble and do not change the intended meaning of the claims. Accordingly, the amendments to the preambles of claims 16-28 are not being presented for reasons of patentability as defined in Festo.

**C. 35 U.S.C. § 103**

Claims 1-4, 8-11, 15-18 and 22-28 were rejected under 35 U.S.C. § 103 as being obvious in view of Yoshii et al. and Yamamauchi. Claims 1 and 15 have been amended to clarify that the “second appendage is not attached to said first appendage.” As demonstrated above in Section B, Yoshii et al. discloses that the connecting portions 4a of the two appendages are attached to one another. In addition, Yoshii et al. does not suggest disconnecting portions 4a. Since Yamamauchi also does not suggest altering Yoshii et al.’s structure so that the portions 4a of Yoshii et al. are disconnected from one another, claims 1 and 15 are patentable over Yoshii et al. and Yamamauchi.

**D. New Claims 32 and 34**

Claims 32 and 34 depend from claims 1 and 15, respectively, and so are patentable for at least the same reasons given above in Sections B and C. Claims 32 and 34 are patentable for the additional reason that each recite that the first appendage does not substantially abut any part of the second appendage. As shown in FIG. 1 of Yoshii et

al. the portions 4a and the most downstream portions 10 of the two appendages substantially abut one another. Since there is no suggestion or motivation in either Yoshii et al. or Yamamauchi to prevent the portions 4a and 10 of Yoshii et al. from substantially abutting one another, the claims should be deemed patentable over Yoshii et al. and Yamamauchi.

Please note that new claims 32 and 34 are being presented to provide additional coverage for a heat exchanger tube and a heat exchanger system, respectively. Accordingly, the new claims are not being presented for reasons of patentability as defined in Festo.

**E. New Claims 33 and 35**

Claims 33 and 35 indirectly depend from claims 1 and 15, respectively, and so are patentable for at least the same reasons given above in Sections B and C. Claims 33 and 35 are patentable for the additional reason that each recite that the first appendage is continuously curved from an end of the tube to a free end of the first appendage. As shown in FIG. 1 of Yoshii et al. items 4a, 10, 4e and 4f of the two appendages do not form a continuous curve. Since there is no suggestion or motivation in either Yoshii et al. or Yamamauchi to form items 4a, 10, 4e and 4f of Yoshii et al. in a continuous curve, the claims should be deemed patentable over Yoshii et al. and Yamamauchi.

Please note that new claims 33 and 35 are being presented to provide additional

coverage for a heat exchanger tube and a heat exchanger system, respectively.


Accordingly, the new claims are not being presented for reasons of patentability as defined in Festo.

### **CONCLUSION**

In view of the arguments above, Applicant respectfully submits that all of the pending claims 1-35 are in condition for allowance and seeks an early allowance thereof.

If for any reason, the Examiner is unable to allow the application in the next Office Action and believes that an interview would be helpful to resolve any remaining issues, he is respectfully requested to contact the undersigned attorneys at (312) 321-4200.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John C. Freeman", is written over a horizontal line.

John C. Freeman  
Registration No. 34,483  
Attorney for Applicant

BRINKS HOFER  
GILSON & LIONE  
P.O. Box 10395  
Chicago, Illinois 60610  
(312) 321-4200

Dated: March 17, 2003



### Marked Up Version of Amended Claims

1. (Amended) A heat exchanger tube for use in a vehicle, comprising:

a tube extending in an axial direction and comprising an end;

a first appendage attached to said end; and

a second appendage attached to said end;

wherein said first appendage and said second appendage are spaced from one another and said second appendage is not attached to said first appendage and does not form an enclosed space with said first appendage.

15. (Amended) A heat exchanger system, comprising:

a condenser;

a tube extending in an axial direction and comprising an end;

[side tube disposed adjacently to said condenser;]

a first appendage attached to said end; and

a second appendage attached to said end;

wherein said first appendage and said second appendage are spaced from one another and said second appendage is not attached to said first appendage and does not form an enclosed space with said first appendage.

16. (Amended) The heat exchanger [tube] system of claim 15, wherein said first appendage is curved.

17. (Amended) The heat exchanger [tube] system of claim 16, wherein said second appendage is curved.

18. (Amended) The heat exchanger [tube] system of claim 17, wherein said first and second appendages face each other.

19. (Amended) The heat exchanger [tube] system of claim 15, wherein said first appendage is straight.

20. (Amended) The heat exchanger [tube] system of claim 19, wherein said second appendage is straight.

21. (Amended) The heat exchanger [tube] system of claim 20, wherein said first and second appendages are substantially parallel to one other.

22. (Amended) The heat exchanger [tube] system of claim 15, wherein said condenser is positioned within an [automotive] automobile.

23. (Amended) The heat exchanger [tube] system of claim 15, wherein said condenser is [a residential condenser] installed in an air conditioning unit positioned within a residence.

24. (Amended) The heat exchanger [tube] system of claim [15] 22, wherein said condenser is [a radiator oil cooler] part of a cooling system of said automobile.

25. (Amended) The heat exchanger [tube] system of claim 15 wherein said tube further comprises a second end;

a third appendage attached to said second end;

a fourth appendage attached to said second end; and

wherein said third appendage and said fourth appendage are spaced from one another and said fourth appendage does not form an enclosed space with said third appendage.

26. (Amended) The heat exchanger [tube] system of claim 25, wherein said third appendage is curved.



27. (Amended) The heat exchanger [tube] system of claim 26, wherein said fourth appendage is curved.

28. (Amended) The heat exchanger [tube] system of claim 27, wherein said third and fourth appendages face each other.

29. (Amended) The heat exchanger [tube] system of claim 25, wherein said third appendage is straight.

30. (Amended) The heat exchanger [tube] system of claim [30] 29, wherein said fourth appendage is straight.

31. (Amended) The heat exchanger [tube] system of claim 30, wherein said third and fourth appendages are substantially parallel to one other.